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ROUTEING OF SHIPS, SHIP REPORTING AND RELATED MATTERS

No anchoring areas for Flower Garden Banks in the Northwestern Gulf of Mexico

Submitted by the United States

SUMMARY

Executive summary: This document sets forth a proposal for mandatory no anchoring areas on three coral reef banks ("Flower Garden Banks") in the northwestern Gulf of Mexico by ships greater than 30.48 meters (100 feet in overall length), for consideration and approval by the Sub-Committee on Safety of Navigation and forwarding to the Maritime Safety Committee for adoption. This proposal should be considered in conjunction with NAV 46/3/2, which proposes amendment of the General Provisions on Ships' Routeing to provide for the measure proposed in this document.

Action to be taken: Paragraph 14

Related documents: NAV 46/3/2

Introduction

1 This proposal must be read in conjunction with NAV 46/3/2, which is a proposal by the United States to amend the General Provisions on Ships' Routeing (GPSR) to provide for a no anchoring area measure. Consistent with the manner in which the Sub-Committee handled the issue of amendment of the GPSR to provide for the designation of archipelagic sealanes and the Indonesian proposal to designate such sealanes, NAV 46 should first consider the United States proposal to amend the GPSR and then this proposal to establish three specific no anchoring areas.

2 The United States proposes the establishment of mandatory no anchoring areas to be adopted by the IMO for ships greater than 30.48 metres (100 feet in overall length) on Flower Garden Banks, which are three coral reef banks in the northwestern Gulf of Mexico. The geographic co-ordinates of these three areas are set forth in the annex. The size of the three areas combined is approximately 42.34 square nautical miles.

3 This proposed measure can reasonably be expected to significantly prevent and reduce the risk of damage to the coral marine environment by ships, without restricting the sea area available for navigation. The sizes of the areas and the proposed measures are limited to what is essential for the interests of safe navigation and the protection of the marine environment.

Background

4 Damage to the coral banks by anchoring of large ships has been well demonstrated. Significant damage is caused by the direct impact of large, heavy anchors and from the dragging and swinging of large anchor cables and chains. These activities destroy coral heads and create gouges and scars that destabilize the reef structure. There may be a minimal adverse impact on the shipping industry from complying with this anchoring measure. In contrast, anchoring on these coral banks causes significant adverse environmental effects to these resources. Coral such as that in Flower Garden Banks takes thousands of years to build. The regeneration of the reef from anchor damage may never occur. If optimal conditions for regeneration exist, it would still take hundreds and perhaps thousands of years for the reef to return to its condition before the damage.

5 The proposed areas have been designated by the United States as Flower Garden Banks National Marine Sanctuary. These areas are unique even among the world's coral reefs. The banks contain the northernmost coral reefs on the North American continental shelf and support the most highly developed offshore hard-bank communities in the region. They are of considerable interest to scientists because they are isolated from other reef systems by over 550 kilometers and exist in areas where slight changes in hydrographic conditions could significantly reduce reef community health. There are also organisms otherwise unknown on the world's continental shelves. These organisms are generally associated with a hypersaline, anoxic brine seep having a chemosynthetic energy base analogous to that found at deep-sea hydrothermal vents.

6 The reefs in Flower Garden Banks crest at approximately 15 meters below the water surface and extend downward to 46 meters depth, where the hermatypic (reef building) corals are replaced by reefal communities dominated by coralline algae and sponges. This deeper "algal terrace" covers most surfaces down to a depth of 90 meters. The area has at least 20 species of hermatypic corals, 80 species of algae, 196 known macro-invertebrate species, and supports more than 200 fish species. The reef-building corals and coralline algae construct and maintain the substratum and, through a multitude of relationships, largely control the structure of benthic communities occupying the banks. As a primary building-block for the entire ecosystem of the banks, the coral and algae are by far the most important organisms in the Flower Garden Banks ecosystem.

7 This area is transited by commercial ships, many of which are en route to and from the United States ports in Texas and Louisiana. A major east-west shipping fairway passes approximately 11 kilometers south of Flower Garden Banks. Other large ships in the area generally follow fairways approximately 65 kilometers to the west and 80 kilometers to the east of Flower Garden Banks.

8 In addition to transiting ships, the other human activities that take place around and within Flower Garden Banks National Marine Sanctuary are commercial fishing, recreational pursuits, and research. Oil and gas exploration and development activities also occur in the area surrounding the sanctuary, but they are strictly regulated so as to prevent adverse impacts on the

sanctuary. These human activities–including the anchoring of vessels–are strictly regulated or prohibited.

9 There is clear evidence of anchoring damage to Flower Garden Banks from large ships. Scars or tracks of pulverized coral have been documented by studies conducted by submersibles or divers. The largest scar from anchoring found to date extends for approximately 1.7 kilometers and resembles a continuous, "roadcut-like" gouge into the bank. Another crater-like scar measures approximately 50 meters in diameter. Chain scars from the swinging of ships on their anchors are evident on many corals. There are hundreds of abraded, fractured, and toppled coral colonies that appear to be from the dragging of anchors or anchor cables and chains. Loose coral pieces act as agents of further injury to the living coral, particularly during heavy seas and storms as the pieces are repeatedly driven into and around the living coral.

Proposal

10 The United States proposes mandatory no anchoring areas for ships greater than 30.48 meters (100 feet in overall length) to protect coral in Flower Garden Banks National Marine Sanctuary from destruction. Hydrographic surveys of the areas have been conducted and appropriate aids to navigation exist. The proposal will not interfere with any existing patterns of ship traffic. Other areas are available for ships to anchor, in particular in recommended anchorage areas outside of area ports. Additionally, because this no anchoring area measure allows ships to continue to navigate through the area, it does not have the effect of limiting the sea area available for navigation.

11 The significant damage that has been, and continues to be, caused by anchoring in this unique area is sufficient justification for the establishment of a mandatory measure. The United States has attempted to address this problem through domestic anchoring regulations and by notifying mariners through various means, such as notices to mariners; however, ships continue to anchor in this area. Thus, it is appropriate at this time to pursue a measure through the IMO.

12 Safety considerations also support establishment of this measure. As set forth in NAV 46/3/2, the safety of a ship can depend on the ability of its anchor to hold and the character of the bottom is of prime importance. Coral provides an unstable anchoring bottom. The scars and gouges are clear evidence that anchors tend to drag along the bottom rather than hold in the coral. Because there are a number of platforms and pipelines in this area it is very important from a safety perspective for ships to anchor only in areas where the bottom will provide good holding ground.

Additional Considerations

13 The United States has taken several steps domestically to protect Flower Garden Banks National Marine Sanctuary from damage by anchoring. A sanctuary regulation was promulgated in 1992 prohibiting the anchoring of ships greater than 30.48 meters (100 feet). The United States has also adopted several regulations prohibiting and restricting the anchoring by smaller vessels. Notifications of these regulations are published on the U.S. nautical charts, in notices to mariners, the United States Code of Federal Regulations, and on the NOAA sanctuary web page (http://www.sanctuaries.nos.noaa.gov).

Conclusion

14 The Sub-committee is asked to approve this proposal for a measure establishing mandatory no anchoring areas for ships which are greater than 30.48 meters (100 feet in overall length) in the area set forth in the annex and forward the proposal to the Maritime Safety Committee for its adoption. The United States requests that the effective date of implementation be six months after adoption.

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ANNEX

East Flower Garden Bank
(NAD 83)(Chart No. 11340)

Point Number	Latitude (N)	Longitude (W)
E-1	27º52'.91	93º37'.70
E-2	27º53'.60	93º38'.40
E-3	27º55'.24	93º38'.68
E-4	27º57'.53	93º38'.56
E-5	27º58'.48	93º37'.78
E-6	27º59'.04	93º35'.54
E-7	27º59'.03	93º35'.17
E-8	27º55'.39	93º34'.26
E-9	27º54'.08	93º34'.32
E-10	27º53'.46	93º35'.09
E-11	27º52'.88	93º36'.96

West Flower Garden Bank
(NAD 83)(Chart No. 11340)

Point Number	Latitude (N)	Longitude (W)
W-1	27º49'.19	93º50'.76
W-2	27º50'.22	93º52'.18
W-3	27º51'.23	93º52'.87
W-4	27º51'.56	93º52'.85
W-5	27º52'.85	93º52'.42
W-6	27º55'.03	93º49'.74
W-7	27º54'.99	93º48'.64
W-8	27º54'.60	93º47'.18
W-9	27º54'.26	93º46'.83
W-10	27º53'.61	93º46'.86
W-11	27º52'.97	93º47'.26
W-12	27º50'.69	93º47'.38
W-13	27º49'.20	93º48'.72

Stetson Bank
(NAD 83)(Chart Nos. 11300, 11330, 11340)

Point Number	Latitude (N)	Longitude (W)
S-1	28º 09'.52	94º 18'.53
S-2	28º 10'.17	94º 18'.50
S-3	28º 10'.13	94º 17'.40
S-4	28º 09'.48	94º 17'.43